

## Claims

- [c1] An ice maker comprising:  
a mold comprising at least one cavity for containing water therein for freezing into ice;  
a water supply comprising at least one valve for controlling water flow into said mold;  
an ice removal heating element operationally coupled to said mold; and  
an ice maker control system operationally coupled to said valve and said ice removal heating element and configured to:  
control said valve;  
control said ice removal heating element; and  
provide a signal to a refrigerator control system.
- [c2] An ice maker in accordance with Claim 1 wherein said ice maker control system further configured to transmit to the refrigerator control system a signal that said valve is in an open state letting water flow into said at least one mold cavity.
- [c3] An ice maker in accordance with Claim 1 wherein said ice maker control system further configured to transmit to the refrigerator control system a signal that said valve was in an open state letting water flow into said at least one mold cavity.
- [c4] An ice maker in accordance with Claim 1 wherein said ice maker control system further configured to transmit to the refrigerator control system a signal that said ice removal heating element is energized.
- [c5] A refrigerator comprising:  
a fresh food compartment;  
a freezer compartment separated from said fresh food compartment by a mullion;  
an ice maker positioned within said freezer cavity; and  
a refrigerator control circuit configured to control a temperature of said freezer compartment and said fresh food compartment, said refrigerator control system configured to receive a signal representative of a user selected ice maker speed.

- [c6] A refrigerator in accordance with Claim 5 wherein said refrigerator control system configured to control the temperature of said freezer compartment based on the received signal.
- [c7] A refrigerator in accordance with Claim 5 further comprising a fan positioned to move air in said freezer compartment, said refrigerator control system configured to control said fan based on the received signal.
- [c8] A refrigerator in accordance with Claim 5 further comprising a fan positioned to move air in said freezer compartment, said refrigerator control system configured to control said fan based on the received signal representative of a user selected mode including a speed ice mode and a normal ice mode such that:  
 when the received signal is representative of speed ice mode:  
 said fan is energized during cooling cycles, and  
 said fan is energized selectively during non-cooling cycles in conjunction with predetermined ice make modes; and  
 when the received signal is representative is normal ice mode:  
 said fan is energized during cooling cycles, and  
 said fan is de-energized during non cooling cycles. .
- [c9] A refrigerator comprising:  
 a fresh food compartment;  
 a refrigerator evaporator operationally coupled to said fresh food compartment and configured to cool said fresh food compartment;  
 a refrigerator evaporator fan positioned to move air across said refrigerator evaporator;  
 a freezer compartment separated from said fresh food compartment by a mullion;  
 a freezer evaporator operationally coupled to said freezer cavity and configured to cool said freezer cavity;  
 a freezer evaporator fan positioned to move air across said freezer evaporator;  
 an ice maker positioned within said freezer cavity; and  
 a refrigerator control system configured to control at least one of said freezer evaporator and said freezer evaporator fan, said refrigerator control system configured to receive a signal regarding said ice maker.

- [c10] A refrigerator in accordance with Claim 9 wherein said refrigerator control system further configured to control at least one of said freezer evaporator and said freezer evaporator fan based upon the received ice maker signal.
- [c11] A refrigerator in accordance with Claim 10 wherein said refrigerator control system further configured to control both of said freezer evaporator and said freezer evaporator fan based upon the received ice maker signal.
- [c12] A refrigerator in accordance with Claim 9 wherein said ice maker comprises:  
a mold comprising at least one cavity for containing water therein for freezing into ice;  
a water supply comprising at least one valve for controlling water flow into said mold;  
an ice removal heating element operationally coupled to said mold; and  
an ice maker control system configured to:  
control said valve;  
control said ice removal heating element ; and  
provide a signal to the refrigerator control system regarding at least one of said valve and said ice removal heating element.
- [c13] A refrigerator in accordance with Claim 12 wherein said ice maker control system further configured to transmit to the refrigerator control system a signal that said valve is in an open state letting water flow into said at least one mold cavity.
- [c14] A refrigerator in accordance with Claim 12 wherein said ice maker control system further configured to transmit to the refrigerator control system a signal that said valve was in an open state letting water flow into said at least one mold cavity.
- [c15] A refrigerator in accordance with Claim 12 wherein said ice maker control system further configured to transmit to the refrigerator control system a signal that said ice removal heating element is energized.
- [c16] A refrigerator in accordance with Claim 12 wherein said refrigerator control system configured to receive a signal representative of a user selected ice maker speed.
- [c17] A refrigerator in accordance with Claim 9 wherein said refrigerator control

system configured to receive a signal representative of a user selected ice maker speed.

- [c18] A refrigerator in accordance with Claim 17 wherein said refrigerator control system further configured to control at least one of said freezer evaporator and said freezer evaporator fan based upon the received ice maker signal when the received signal comprises a speed ice mode indication, and not to control at least one of said freezer evaporator and said freezer evaporator fan based upon the received ice maker signal when the received signal comprises a normal ice mode indication.
- [c19] A refrigerator in accordance with Claim 17 wherein said refrigerator control system configured to control said freezer evaporator fan based on the received signal representative of a user selected ice mode including a speed ice mode and a normal ice mode such that:  
when the received signal is representative of speed ice mode:  
said freezer evaporator fan is energized during cooling cycles, and  
said freezer evaporator fan is energized selectively during non-cooling cycles in conjunction with predetermined ice make modes; and  
when the received signal is representative of normal ice mode:  
said freezer evaporator fan is energized during cooling cycles, and  
said freezer evaporator fan is de-energized during non cooling cycles.
- [c20] A refrigerator in accordance with Claim 19 wherein said ice maker comprises:  
a mold comprising at least one cavity for containing water therein for freezing into ice;  
a water supply comprising at least one valve for controlling water flow into said mold;  
an ice removal heating element operationally coupled to said mold; and  
an ice maker control system configured to:  
control said valve;  
control said ice removal heating element; and  
provide a signal to the refrigerator control system regarding at least one of said valve and said ice removal heating element.